

REMARKS

This is responsive to an Office Action mailed on March 29, 2007. In the Office Action, claims 1, 3-5, 7, 10-13, and 30-33 were rejected and claims 18, 20, 23-26 and 28 were allowed. Claims 2, 6, 8, 9, 14, 16, 17, 21, 22, 27, and 29 were withdrawn from consideration. Applicant has amended claims 1 and 30 and has canceled claims 3, 34 and 35. Support for the amendments can be found at least at p. 19, line 28-p. 20, line 17 and Figure 15G of the application. The application currently includes pending claims 1, 4, 7, 10-13, 18-20, 23-26, 28, and 30-35.

The Office Action alleges that claims 1, 3-5, 7, 10-13, and 34 and 35 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Office Action alleges that the specification does not describe at least one arm of the pair of arms having a blind tapered slot as claimed in claims 1 and 34 and requested a clarification. Applicant has amended claim 1 and canceled claims 3, 34, and 35. Claim 1 has been amended to remove the description of the tapered slot as being blind. With the amendment, Applicant believes that claims 1, 4, 5, 7, and 10-13 comply with the written description requirement. Applicant respectfully requests that the 35 U.S.C. § 112, first paragraph, rejections of claims 1, 4, 5, 7, and 10-13 be withdrawn.

The Office Action also rejected claims 1, 3, 10 and 30-35 under 35 U.S.C. § 102(b) as being anticipated by Tener U.S. Pat. No. 2,470,327. The Office Action alleges that the Tener Patent discloses in FIGs. 1-3 a tool for fastening, including one pair of arms, 20 and 21 where at the least one arm of the pair has a tapered protrusion 25 and the other arm has a blind tapered slot 26. The Office Action alleges that the arms pivot from one orientation to a gripping position with the ends of the pair of arms are directed toward each other as best seen in FIG. 3.

Applicant respectfully disagrees that independent claims 1 and 30 are anticipated by the Tener Patent. Elements of claim 1 include one arm having a tapered protrusion and the other arm having a tapered slot configured to accept the tapered protrusion. Elements of claim 30 include a tapered spike extending from one arm that positions within a tapered slot in the other arm when in a gripping position.

The Tener Patent does not disclose the claimed structure. Rather, the edges of the gripping claws 24 and 25 are substantially flat and abut each other. The Tener Patent also discloses that both gripping claws 24 and 25 have notches 26 that align to form a substantially circular opening when the edges of the jaws abut. The gripping claws do not include a tapered protrusion or a tapered slot as claimed in claim 1 or a tapered spike and a tapered slot as claimed in claim 30.

Therefore, the Tener Patent does not anticipate either independent claim 1 or independent claim 30. Reconsideration and allowance of claims 1 and 30 are respectfully requested.

The Office Action also rejected claims 10, 31, 32, and 33 as being anticipated by the Tener Patent. While Applicant does not acquiesce to the rejections of claims 10, 31, 32, and 33, Applicant submits that the rejections are moot in light of the fact that independent claims 1 and 30 are not anticipated by the Tener Patent. Reconsideration and allowance of claims 10, 31, 32, and 33 are respectfully requested.

The Office Action also rejected claims 1, 3-5, 7, 10-13, and 30-33 under 35 U.S.C. § 103(a) as being obvious over Middleman et al., U.S. Pat. No. 5,601,572. Regarding claim 1, the Office Action alleges that the Middleman Patent discloses in FIG. 8-4c, a surgical instrument having the limitations as recited in claim 1 including one pair of arms 21, 23 where the at least one arm of the pair of arms has at least a tapered protrusion along the curved end at 29 that is capable of fastening two adjacent heart leaflets, where the arms move from one orientation to a gripping position with the paired arms being adjacent and directed towards each other as best seen in FIG. 8-4a. The Office Action states the Middleman Patent is silent and that the other arm has a blind tapered slot. However, the Office Action indicates that the Middleman Patent indicates that the device has a pair of arms 21, 22 which is able to be directed toward each other as best and in FIG. 8-4a. The Office Action alleges that at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the Middleman device with an arm having a blind tapered slot because the Applicant has not disclosed that providing an arm with a blind tapered slot has an advantage, as used for a particular purpose or solve a stated problem.

Regarding claim 30, the Office Action alleges that the Middleman Patent disclosed in

FIG. 8-9 a fastening device comprises a cap 103 which is slideable relative to a gripper 102 where the gripper comprises a plurality of arms 102, 106 from a pivot. The Office Action alleges that the arms have a spike 104 where the cap comprises a locking mechanism to lock the gripper in a locked position and references FIGs. 8-9.

Applicant respectfully disagrees that the Middleman Patent makes independent claim 1 obvious. An element of independent claim 1 includes a tapered protrusion extending from one arm towards the other arm. The other arm includes a tapered slot for accepting the tapered protrusion. There is no disclosure in the Middleman Patent of such a structure. The Office Action is alleging that the tapered protrusion claim element is met by the tapered end of the arms as illustrated in FIG. 8-4b. The curved end 29 of the arm 21 is not a protrusion extending from one arm toward the other arm. Also, there is no disclosure of a tapered slot. Rather, the gripping surfaces are flat surfaces. Flat surfaces grip along a line in one dimension and do not provide the secure grip of the leaflets that the claimed structure provides. Inserting a tapered protrusion into a tapered slot provides a grip in two dimensions and also along a greater surface area than a straight line. The claimed structure increases the grip on the leaflets and prevents the leaflets from slipping in the device.

Claim 30 also requires a tapered spike that positions within the tapered slot. For the reasons stated with respect to independent claim 1, the Middleman Patent does not disclose a tapered spike that positions within a tapered slot which provides the advantage of providing more surface area for gripping the adjacent leaflets in two dimensions. The claimed structure securely grips the leaflets which increases the reliability of the device.

Therefore, Applicant submits that the Middleman Patent does not make independent claims 1 or 30 obvious. Reconsideration and allowance of claims 1-30 are respectfully requested.

The Office Action also rejected dependent claims 4, 5, 7, 10-13, and 31-33 as being obvious over the Middleman Patent. While Applicant does not acquiesce to the rejections that dependent claims 4, 5, 7, 10-13, and 31-33, Applicant submits that these rejections are moot in light of the fact that independent claims 1 and 30 are not obvious over the Middleman Patent. Reconsideration and allowance of dependent claims 4, 5, 7, 10-13, and 31-33 are respectfully requested.

Fore the foregoing reasons, Applicant submits that the present application is in allowable form. Reconsideration and allowance of the application are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: 
Peter J. Ims, Reg. No. 48,774
Suite 1400
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312

PJI:tlr